REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

By the foregoing amendment, claims 7-9, 12, and 15-17 have been amended. No new matter has been added. Thus, claims 7-17 are currently pending in the application and subject to examination.

In the Office Action mailed March 21, 2006, the Examiner objected to claims 8-17 as being dependent from a canceled base claim. Claims 8, 9, 12, and 15-17 have been amended responsive to this amendment. If any additional amendment is necessary to overcome this rejection, the Examiner is requested to contact the Applicant's undersigned representative.

The Examiner rejected claims 7-11 and 15-17 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No 6,882,722 to Lowery et al. ("Lowery"). The Examiner rejected claims 12-14 under 35 U.S.C. § 103(a) as being unpatentable over Lowery in view of U.S. Patent No. 6,735,391 to Lee et al. ("Lee"). It is noted that claim 7 has been amended. To the extent that the rejections remain applicable to the claims currently pending, the Applicant hereby traverses the rejection, as follows.

The Applicants' invention as now set forth in amended claim 7 is directed to a multiple delay line including an arrayed waveguide grating (AWG) comprising a plurality of sections of a dispersive optical medium forming at least one feedback line in the arrayed waveguide grating, wherein the plurality of sections of the dispersive optical medium have lengths with a constant linear incremental increase.

Lowery discloses a *modified* arrayed waveguide grating based on using non-constant length increments between adjacent waveguides. (See Lowery abstract and column 3, lines 18-45). This results in a widening of the bandpass width, as shown in Lowery Figure 3, as well as the generation of certain amounts of dispersion in the bandpass, as shown in Figure 4. The particular dispersion is caused by the altered lengths of the waveguides according to the formula $L=L_0+i\Delta L+i^n k$ instead of by the material of the waveguides, as claimed in amended claim 7.

Furthermore, when Lowery discusses the possibility of feed-back, Lowery states "[t]his would give N times the dispersion compensation of a single-pass device" where N is the number of times the feedback occurs. (See Lowery, column 6, lines 5-14). Thus, Lowery teaches the dispersion occurring not in the feedback lines, but in the modified arrayed waveguide grating. The feedback line is merely used to cross the modified arrayed grating N times in order to increase the dispersion by N times. Lowery does not disclose or suggest dispersive feedback lines used to increase dispersion. If such a modification was made to Lowery, the modified arrayed waveguide grating proposed by Lowery would be redundant.

The Applicants submit that Lee fails to cure the deficiency described above for Lowery.

For at least this combination of reasons, the Applicants submit that claim 7 is allowable over the cited art. As claim 7 is allowable, the Applicants submit that claims 8-17, which depend from allowable claim 7, are likewise allowable.

In addition, the Applicants submit that claim 8 is further allowable because Lowery does not disclose or suggest at least the claimed feature of the plurality of

sections of the dispersive optical medium comprising at least one of a section of a dispersive optical fiber, a diffraction network, and a medium that is dispersive in both transmission and reflection. The Examiner cites column 1, lines 35-47 in Lowery as teaching this feature. However, column 1, lines 35-47 discusses prior methods of dispersion compensation before the invention of Lowery, such as fiber Bragg gratings and DCF. Lowery teaches an invention to be used in place of these prior methods. Lowery does not teach these methods used jointly with the invention of Lowery.

In addition, for the rejection of claims 12-14 under §103 in the Office Action, it is also respectfully submitted that the Examiner has not yet set forth a *prima facie* case of obviousness. The PTO has the burden under §103 to establish a *prima facie* case of obviousness. In re Fine, 5 U.S.P.Q.2nd 1596, 1598 (Fed. Cir. 1988). Both the case law of the Federal Circuit and the PTO itself have made clear that where a modification must be made to the prior art to reject or invalidate a claim under §103, there must be a showing of proper motivation to do so. The mere fact that a prior art reference could arguably be modified to meet the claim is insufficient to establish obviousness. The PTO can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. Id. In order to establish obviousness, there must be a suggestion or motivation in the reference to do so. See also In re Gordon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984) (prior art could not be turned upside down without motivation to do so); In re Rouffet, 149 F.3d 1350 (Fed. Cir. 1998); In re Dembiczak, 175 F.3d 994 (Fed. Cir. 1999); In re Lee, 277 F.3d 1338 (Fed. Cir. 2002).

In the Office Action, the Examiner merely states that the present invention is obvious in light of the cited references. See, e.g., Office Action at page 6. This is an insufficient showing of motivation.

For at least these reasons, the Applicants submit that claims 7-17 are allowable over the cited art and respectfully request a withdrawal of the rejections.

CONCLUSION

For all of the above reasons, it is respectfully submitted that the claims now pending patentability distinguish the present invention from the cited references. Accordingly, reconsideration and withdrawal of the outstanding rejections and an issuance of a Notice of Allowance are earnestly solicited.

Should the Examiner determine that any further action is necessary to place this application into better form, the Examiner is encouraged to telephone the undersigned representative at the number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of time. The fee for this extension may be charged to our Deposit Account No. 01-2300. The Commissioner is hereby authorized to charge any fee deficiency or credit any overpayment associated with

this communication to Deposit Account No. 01-2300, with reference to Attorney Docket No. 027318-00003

Respectfully submitted,

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